

## Evans, Rhonda

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**From:** Evans, Rhonda  
**Sent:** Tuesday, March 11, 2014 2:03 PM  
**To:** Fasselt, Veronica  
**Subject:** FW: APNEP Grant

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**From:** Crowell, Bill [<mailto:bill.crowell@ncdenr.gov>]  
**Sent:** Tuesday, December 31, 2013 9:56 AM  
**To:** Evans, Rhonda  
**Subject:** Re: APNEP Grant

We can talk on Monday.

Happy New Year.

REDACTED

NON-RESPONSIVE

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**From:** <Evans>, Rhonda <[Evans.Rhonda@epa.gov](mailto:Evans.Rhonda@epa.gov)>  
**Date:** Tuesday, December 31, 2013 8:35 AM  
**To:** William Crowell <[bill.crowell@ncdenr.gov](mailto:bill.crowell@ncdenr.gov)>  
**Subject:** RE: APNEP Grant

NON-RESPONSIVE

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**From:** Crowell, Bill [<mailto:bill.crowell@ncdenr.gov>]  
**Sent:** Monday, December 30, 2013 3:07 PM  
**To:** Evans, Rhonda  
**Subject:** Re: APNEP Grant

I will back in the office on Thursday. You & I should talk briefly before we use Morgan's time.

BC

William L. Crowell, Jr., Ph.D., AICP, CEE  
Director  
Albemarle-Pamlico National Estuary Partnership  
1601 Mail Service Center  
Raleigh, NC 27699-1601  
(919) 707-8633  
[Bill.Crowell@apnep.org](mailto:Bill.Crowell@apnep.org)

*E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.*

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**From:** <Evans>, Rhonda <[Evans.Rhonda@epa.gov](mailto:Evans.Rhonda@epa.gov)>  
**Date:** Monday, December 30, 2013 2:12 PM  
**To:** William Crowell <[bill.crowell@ncdenr.gov](mailto:bill.crowell@ncdenr.gov)>

**Cc:** Morgan Jackson <[jackson.morgan@epa.gov](mailto:jackson.morgan@epa.gov)>

**Subject:** RE: APNEP Grant

Hi Bill, A contract past Sept 30, 2013 is fine from our end because we extended your existing cooperative agreement and added funds for another year to September 30, 2014. (and for the last few years we have been using the same cooperative agreement and adding funds to it). If you need it extended past September 30, 2014, I need to discuss with you because I believe we are going to need to do a new cooperative agreement this year. We can only extend them for a certain number of years (I think it's seven). If that does not answer your question, please let me know. I will try to get a conference call with you and Morgan if we need to. Rhonda

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**From:** Crowell, Bill [<mailto:bill.crowell@ncdenr.gov>]

**Sent:** Thursday, December 19, 2013 10:32 AM

**To:** Evans, Rhonda

**Cc:** Smart, Lindsey S; Todd Miller

**Subject:** Re: APNEP Grant

Rhonda

Did not receive a response from back in May. I believe you said that you needed to check with Morgan. The STAC and Policy Board executive committees met yesterday and they are interested in getting conformation of this issue.

Bill

William L. Crowell, Jr., Ph.D., AICP, CEE

Director

Albemarle-Pamlico National Estuary Partnership

1601 Mail Service Center

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[Bill.Crowell@apnep.org](mailto:Bill.Crowell@apnep.org)

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**From:** <Crowell>, William Crowell <[bill.crowell@ncdenr.gov](mailto:bill.crowell@ncdenr.gov)>

**Date:** Wednesday, May 22, 2013 8:23 AM

**To:** "Evans, Rhonda" <[Evans.Rhonda@epa.gov](mailto:Evans.Rhonda@epa.gov)>

**Cc:** Lindsey Smart <[lindsey.smart@ncdenr.gov](mailto:lindsey.smart@ncdenr.gov)>

**Subject:** APNEP Grant

Rhonda

During the recent Policy Board meeting it was noted that our annual grant under the cooperative agreement extends pass the federal fiscal year. We are currently working to establish a contract that will need to expend pass Sept. 30, 2013.

Can you provide me with an official letter that states that funds are available pass the grant end date as it is part of the larger cooperative agreement?

Bill

William L. Crowell, Jr., Ph.D., AICP, CEE

Director

Albemarle-Pamlico National Estuary Partnership

1601 Mail Service Center  
Raleigh, NC 27699-1601  
(919) 707-8633  
[Bill.Crowell@apnep.org](mailto:Bill.Crowell@apnep.org)

*E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.*



Evans, Rhonda

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**From:** Evans, Rhonda  
**Sent:** Tuesday, March 11, 2014 2:04 PM  
**To:** Fasselt, Veronica  
**Subject:** FW: Comments for North Carolina Department of Environment and Natural Resources Triennial Review meeting held November 19 2013 by Spruill.Nov19triennialcomments.docx  
**Attachments:**

REDACTED

Exemption 6 Personal Privacy

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**From:** Crowell, Bill [<mailto:bill.crowell@ncdenr.gov>]  
**Sent:** Wednesday, December 18, 2013 9:30 PM  
**To:** Todd Miller  
**Cc:** Evans, Rhonda  
**Subject:** FW: Comments for North Carolina Department of Environment and Natural Resources Triennial Review meeting held November 19 2013 by Spruill.Nov19triennialcomments.docx

FYI

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**From:**  
**Date:** Sunday, December 15, 2013 11:37 PM  
**To:** "Brower, Connie" <[connie.brower@ncdenr.gov](mailto:connie.brower@ncdenr.gov)>  
**Cc:** "Reeder, Tom" <[tom.reeder@ncdenr.gov](mailto:tom.reeder@ncdenr.gov)>, "Fransen, Tom" <[tom.fransen@ncdenr.gov](mailto:tom.fransen@ncdenr.gov)>, William Crowell <[bill.crowell@ncdenr.gov](mailto:bill.crowell@ncdenr.gov)>, Grady Mccallie <[grady@ncconservationnetwork.org](mailto:grady@ncconservationnetwork.org)>, "Reid, Dianne" <[dianne.reid@ncdenr.gov](mailto:dianne.reid@ncdenr.gov)>, Kelly Foster <[kfoster@waterkeeper.org](mailto:kfoster@waterkeeper.org)>, Heather Jacobs <[riverkeeper@ptrf.org](mailto:riverkeeper@ptrf.org)>, Mitch Blake <[mitch@neuseriver.org](mailto:mitch@neuseriver.org)>, Dean Carpenter <[dean.carpenter@ncdenr.gov](mailto:dean.carpenter@ncdenr.gov)>, Stan Meiburg <[Meiburg.stan@Epa.gov](mailto:Meiburg.stan@Epa.gov)>, Lisa-Perras Gordon <[Gordon.lisaperras@Epa.gov](mailto:Gordon.lisaperras@Epa.gov)>  
**Subject:** Comments for North Carolina Department of Environment and Natural Resources Triennial Review meeting held November 19 2013 by Spruill.Nov19triennialcomments.docx

Dear Connie,

I am submitting my comments regarding the November 19 2013 Triennial Review regarding the lack of numeric nutrient criteria for North Carolina. These comments are longer than I had hoped, but I did bold those points that I believe are most important. If you or any recipients of this email have any questions regarding these comments, I can be reached at 919.435.4333 or, of course, my email [rhonda.evans@ncdenr.gov](mailto:rhonda.evans@ncdenr.gov). Thanks very much for the opportunity to comment and have a wonderful holiday.

Tom Crowell

Sent from Windows Mail



**Gordon, Lisa Perras**

**REDACTED**

**From:** [redacted]  
**Sent:** Wednesday, December 18, 2013 9:54 PM  
**To:** Gordon, Lisa Perras  
**Subject:** Fw: Comments for North Carolina Department of Environment and Natural Resources Triennial Review meeting held November 19 2013 by [redacted]  
**Attachments:** [redacted]v19triennialcomments.docx

Sent from Windows Mail

**From:** [redacted]  
**Sent:** Wednesday, December 18, 2013 8:13 PM  
**To:** Lisa-Perras Gordon

**Information Redacted pursuant to 5 U.S.C. Section 552 (b)(6), Personal Privacy**

Sent from Windows Mail

**From:** [redacted]  
**Sent:** Sunday, December 15, 2013 11:37 PM  
**To:** Connie Brower  
**Cc:** Tom Reeder DENR, Tom Fransen, Bill Crowell, Benne Hutson, Grady Mccallie, Dianne Reid, Kelly Foster, Heather Jacobs Deck, Mitch Blake, NC DENR, Stan Meiburg, Lisa-Perras Gordon

Dear Connie,

I am submitting my comments regarding the November 19 2013 Triennial Review regarding the lack of numeric nutrient criteria for North Carolina. These comments are longer than I had hoped, but I did bold those points that I believe are most important. If you or any recipients of this email have any questions regarding these comments, I can be reached at [redacted] or, of course, my email [redacted]. Thanks very much for the opportunity to comment and have a wonderful holiday.

Sent from Windows Mail





REDACTED

To: Connie Brower, Surface Water Quality Standards, North Carolina Division of Water Resources, Water Quality Programs

From:

Cc: Tom Reeder, Division Director; Dianne Reid, NCDWR Environmental Sciences Section Chief; Tom Fransen, NCDWR Planning Section Chief; Bill Crowell, Director, Albemarle-Pamlico National Estuary Partnership; Dean Carpenter, Program Scientist, Albemarle-Pamlico National Estuary Partnership; Benne Hutson, Chair, North Carolina Environmental Management Commission; Grady McCallie, Policy Director, North Carolina Conservation Network; Kelly Hunter Foster, Senior Attorney, Waterkeeper Alliance; Heather Jacobs Deck, Pamlico-Tar Riverkeeper, Pamlico-Tar River Foundation; Mitch Blake, Lower Neuse Riverkeeper, Neuse Riverkeeper Foundation; Lisa Perras Gordon, US EPA, Region 4; A. Stanley Meiburg, Acting Regional Administrator, Region 4, US EPA

**Comments for North Carolina Department of Environment and Natural Resources Triennial Review meeting held November 19 2013 by**

My name is I am a resident of NC. I am a hydrologist and I worked for USGS for years in North Carolina. I retired in My expertise is in ground and surface-water quality, with much of my interest in the effects of excessive nutrients on aquatic ecosystems.

My comments are directed specifically at the lack of numeric water quality standards for nutrients (nitrogen and phosphorus) for North Carolina. Nutrients were identified by the U.S. EPA<sup>1</sup> in 1996 as the second most prevalent water quality problem in the United States. Currently, the U.S. EPA<sup>2</sup> still (2013) lists nutrient pollution as one of the leading causes of water quality impairment in the United States. Effects of elevated nutrients in lakes have been known since the early 20th century<sup>3</sup> and include severe impacts on fish and invertebrates as well as causing increased bacterial, aesthetic, odor problems, severe oxygen depletion and fish kills in both fresh and salt water. Excessive nutrients have been identified as the primary cause of the occurrence of dead zones in estuaries worldwide, with almost no significant occurrences noted before 1960<sup>4</sup>, when fertilizer usage was just getting started. Dead zones are areas along coasts that have no oxygen which is caused by excessive algal growth and die-off which

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<sup>1</sup> US EPA *National Water Quality Inventory: 1996 Report to Congress*

<sup>2</sup> US EPA Preventing Eutrophication: Scientific Support for Dual Nutrient Criteria Office of Water EPA -820-S-12-002

<sup>3</sup> K.Mackenthun 1965 Nitrogen and Phosphorus in Water: U.S. Public Health Service

<sup>4</sup> Robert J. Diaz and Rutger Rosenberg. 2008. Spreading Dead Zones and Consequences for Marine Ecosystems *Science* V.321 926-929

result in an absence of fish and invertebrates. Shrimp migrate offshore making them inaccessible and difficult or impossible to harvest. The cause of increasing incidence of dead zones has been attributed primarily to excessive nitrogen and phosphorus stream loadings derived from both urban and agricultural pollution.

Fertilizer usage in both the US and Europe increased dramatically between 1960 and the 1990s<sup>5</sup>. Fertilizer usage levels have remained high since the 1990s in the US and slightly decreased in Europe since that time. Unfortunately, while point source pollution controls resulted in improvement in water quality in the late 1980s and early 1990s, nonpoint source pollution control measures to reduce contaminated runoff from farms and cities, have resulted in little overall water quality improvement since the mid-1990s<sup>6</sup>. One likely reason may be that many streams are contaminated with nutrients and carry large amounts of nitrogen and phosphorus into nutrient sensitive rivers and yet have not been identified as such. This results in no efforts to clean them up, while other rivers that may not pose as much of a problem at the entire basin level are identified as impaired. **Thus, dischargers (often point source dischargers) in the identified basin may be expending significant money and resources for reducing nutrients, while dischargers in the unidentified basin have little or no effort or expense to clean up a significant source of nutrients to the river.** An example of this situation is Bear Creek that drains 58 square miles of agricultural land into the nutrient-sensitive Neuse River and is located west of Kinston, NC. There are no point source dischargers in the Bear Creek watershed so that most, if not all, nutrient pollution is nonpoint and agriculturally derived. Although Bear Creek drains only 1 % of the Neuse Basin at Fort Barnwell, NC, it is the source for 6 % of the entire annual nitrogen load of the Neuse at Fort Barnwell and yet it was not identified by NC DWQ as an impaired stream for nutrients. Why? Because there were no biological visual cues (i.e. visible algal growths) that the stream was impaired and no violation of the 40 ug/L chlorophyll a standard used by North Carolina. This deficiency is explained in the following paragraph. *Without specific numeric chemical water quality standards for nutrients, states have limited ability to remediate a watershed or stream reach like Bear Creek that has no overt biological or observable water quality problems at moderate flows because most states rely primarily on assessment of biological effects that are observable.*

Even though nutrients are known, and have been known for at least the last 40 years, to cause excessive algal growths at certain critical concentrations in clear lakes, most states, including North Carolina have not adopted specific numeric nutrient standards. North Carolina currently has a standard for the occurrence of algal growth measured by chlorophyll a concentrations (the *response* to high nutrient concentrations under calm clear water conditions), but not for concentrations of *causal* variables for that growth, namely nitrogen and phosphorus. Given conditions in clear shallow lakes and estuaries of no or very low flow, more algae will grow with addition of more phosphorus in freshwater lakes and more nitrogen in brackish estuaries. *The relationship between chlorophyll a and phosphorus for clear*

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<sup>5</sup> W.H. Schlesinger 1997 Biogeochemistry An analysis of Global Change

<sup>6</sup> NCDENR 2012 Albemarle-Pamlico Ecosystem Assessment last accessed December 18, 2013 at [http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/ecoregions/ecoregions\\_factsheet.cfm](http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/ecoregions/ecoregions_factsheet.cfm)

*lakes and estuaries has been well established since at least 1983<sup>7</sup>, complete with consistent confidence and prediction intervals about the regression. This relationship is affected, however, when water moves rapidly in streams or reservoirs or when water is turbid from sediment or colored from organic acids and restricts light- the relationship is very weak or nonexistent. This is the reason why use of a response variable alone is not adequate to identify nutrient impaired waters and the reason why many streams, lakes or rivers, such as Bear Creek described above or lakes of the Mountains or Piedmont of North Carolina (which are often turbid from silt), are not identified as nutrient impaired.*

One of the first references to nutrient concentration thresholds for causation of nuisance algal growths was reported by C. N. Sawyer as long ago as 1947<sup>8</sup>---he noted that when dissolved P concentrations were at least 0.01 mg/L (or ~ 0.025 mg/L total N) and to dissolved N concentrations were 0.3 mg/L (or ~1 mg/L total N), excessive algal growths were often observed. A highly respected water quality scientist in the 1970s, Ken Mackenthun, indicated that phosphorus concentrations of 0.05 mg/L in lakes and 0.1 mg/L in flowing water entering lakes or estuaries<sup>9</sup> were approximately the maximum allowable concentrations to avoid eutrophication in lakes. Based on later research published in the 1980s and based on hundreds of North American and European lakes included in the study conducted throughout the 1970s<sup>10</sup>, a total P concentration of 0.05 mg/L would result in about 5% of chlorophyll a concentrations greater than the North Carolina limit of 40 ug/L and at a concentration of 0.1 mg/L, about 10% of chlorophyll a concentrations greater than the North Carolina limit. Similarly, loading rate of about 0.05-0.1 ton of total P per square mile (tpsm) will begin to result in excessive algal growths<sup>11</sup>. Based on cell ratios of N: P of 7:1 to 10:1, about 7-10 times the phosphorus concentration would be the maximum allowable nitrogen concentration to limit excessive algal growths in nitrogen limited aquatic ecosystems, or between about 0.35 and 1 mg/L or 0.35 and 1 tpsm to prevent nuisance algal growths in estuaries or lakes. The upper number of the ranges shown would be applied to streams only and the lower limit for lakes and estuaries.

This scientific and quantitative information derived from studies conducted in the 1970s and 1980s, which was paid for largely by taxpayer dollars through the US EPA who sponsored research on the topic of nutrients and eutrophication of lakes that spanned almost 15 years, has been available for at least 30 years<sup>12</sup>. The answers to nutrient questions that EPA and European scientists sought were clear, but most states in the US at least, did not apparently like or ignored the answers. It is only recently that some states have adopted standards for nitrogen and phosphorus at the insistence of EPA. Numeric standards for nutrients have been a requirement to meet requirements of the Clean Water Act of 1972

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<sup>7</sup> W.Rast, G.F. Lee, A. Jones, 1983 Predictive Capability of U.S. OECD Phosphorus Loading-Eutrophication Response Models. Journal (Water Pollution Control Federation), Vol. 55, No. 7 (Jul., 1983), pp. 990-1003

<sup>8</sup> C.N Sawyer 1947 . Fertilization of lakes by agricultural and urban drainage. J. New England Water Works Ass. 61 : 109- 1 27

<sup>9</sup> K. Mackenthun 1973 Toward a Cleaner Aquatic Environment Environmental Protection Agency Office of Air and Water Programs

<sup>10</sup> Rast, W., and Lee, G. F. 1978. Summary Analysis of the North American (U. S. Portion) OECD Eutrophication Project: Nutrient Loading-Lake Response Relationships and Trophic State Indices. U. S. Environ. Prot. Agency, EPA 600/3-78-008, Corvallis, Ore. (1978). 12

<sup>11</sup> W. Rast G.F. Lee and A. Jones 1983 *Ibid*.

<sup>12</sup> W. Rast G.F. Lee and A. Jones 1983 *Ibid*.

and specifically required by EPA to be implemented by 2004<sup>13</sup>. Very little research on developing nutrient-chlorophyll a relationships to establish nutrient standards was conducted after 1990 and I believe explains why most of the literature on the topic is from the 1970s and 80s. That being said, the research was conclusive, very well done, and certainly adequate to establish standards for nutrients even to this day.

To this day, however, no broad nitrogen and phosphorus standards exist for most states including North Carolina and, instead the state has proposed to continue studying the problem for at least 7 more years, further delaying adopting standards that have been needed and were due more than a decade ago. While I'm sure that the decision for more study delights both the regulated community and the scientific organizations and universities who would be involved with such a study, it is inexcusable and irresponsible to North Carolinas citizens and the environment to not adopt nutrient standards now. ***It may be reasonable and desirable to fund scientific studies of nutrient-biological interactions and processes, but it is not reasonable to not establish nutrient standards in lieu of the study. The information needed to establish practical, reasonable, and effective nutrient standards is already available.***

North Carolina could quickly establish protective and equitable nutrient standards that are focused on protecting the most nutrient-susceptible water bodies (lakes and estuaries) directly and they would be standards that are based on a scientifically thorough and publicly funded scientific efforts that were conducted more than 30 years ago, as indicated above. If nothing else, there is abundant evidence to support a P standard for 0.1 mg/L for streams in the Piedmont and Coast and 0.05 mg/L for lakes in these areas. While some other states, such as Florida, have recently adopted standards, their insistence to split stream and lake systems into multiple unique aquatic environments for local standards do not necessarily protect the most vulnerable downstream or quiescent aquatic systems, both lakes and estuaries. Consequently, their approach has resulted in a convoluted, ineffective, and expensive process and one that will be costly to maintain and difficult to enforce. This approach of considering each stream segment and lake unique, does not consider the deleterious downstream water-quality effects of allowing excessive nutrient loads on downstream reservoirs and the estuary. If nutrient standards are not designed to protect the most sensitive downstream part of a basin, local nutrient standards are not likely to protect water quality of the estuary or of receiving reservoirs or lakes and therefore at the basin level. Based on the most recent information from EPA, the States of Wisconsin and New Jersey are currently the only states that have established broad protective standards for lakes and streams. In Wisconsin, streams are to have no more than 0.1 mg/L of P with lakes having sufficiently protective standards that range from 0.005 to 0.04 mg/L depending on the lake type<sup>14</sup>. These numbers are in agreement of standards being proposed here. New Jersey has established a P concentration of 0.1 mg/L for streams and 0.05 mg/L for lakes<sup>15</sup>. Unfortunately, while New Jersey has a standard for nitrogen, New Jersey's standard of 2 mg/L of nitrate for streams is not likely to protect nitrogen limited estuaries and

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<sup>13</sup> <http://www2.epa.gov/nutrient-policy-data/ecoregional-nutrient-criteria-factsheet#expect>

<sup>14</sup> <http://cfpub.epa.gov/wqsits/nnc-development/>

<sup>15</sup> <http://cfpub.epa.gov/wqsits/nnc-development/>

coastal bays because it greatly exceeds the approximately 1 mg/l maximum of total nitrogen (of which nitrate is a component) estimated to be necessary to control primary productivity.

***Every state, including North Carolina, should adopt between 0.02 and 0.05 mg/L total phosphorus (P) and 0.35 mg/L total nitrogen(N) for lakes and about 0.1 mg/L of total P and between 0.7 and 1 mg/L for total nitrogen for streams draining into lakes, reservoirs, or estuaries not used for cultivation of trout. The values in these ranges have been commonly indicated by many different researchers for many different geographic areas in this country and in Europe over decades as thresholds between acceptable and objectionable growths of algae in lakes<sup>16</sup>. For trout streams and lakes in North Carolina, stricter standards are necessary and EPA has suggested standards that would likely be effective: 0.01 mg/L for total P and 0.3 mg/L for total N in streams; 0.008 mg/L for total P and 0.46 mg/L for total N for lakes and reservoirs<sup>17</sup>***

By adopting general nutrient standards based on well-established scientific information, North Carolina has the opportunity (and legal obligation) to provide protection of all of the state's water resources. Clearly established general standards will permit relatively straightforward interpretation and allow the state to focus on watersheds and catchments that pose serious threats to downstream reservoirs and estuaries. The sooner numeric nutrient standards are adopted, the sooner North Carolina will be compliant with the requirements of the Clean Water Act and the sooner the state will be on a path toward providing good quality water now and in the future and toward protecting environmental health and economic interests of all North Carolinians. ***If, instead, NCDENR continues environmental policies and strategies based on what special interests and politicians judge to be appropriate in order to save money and allow continued pollution of the State's water resources, while ignoring scientists and scientific evidence that excess nutrients are a problem and could cost more to the State in the long term in terms of increased pollution that will be more difficult to remove in the future along with the resulting lost fisheries, tourism, and quality of life for the State's residents than the short-term "savings" (that are not), then it is time for EPA to do their job and implement and enforce nutrient standards to uphold requirements of the Clean Water Act.***

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<sup>16</sup> The Impact of inorganic phosphates in the environment. J. Welch USEPA. 1978. EPA 560/1-78-003

<sup>17</sup> [http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/ecoregions/ecoregions\\_factsheet.cfm](http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/ecoregions/ecoregions_factsheet.cfm)



## **Campbell-Dunbar, Shawneille**

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**From:** Moorman, Michelle [mmoorman@usgs.gov]  
**Sent:** Wednesday, November 13, 2013 9:55 AM  
**To:** Hill, Kelly  
**Cc:** adriene.weaver@ncdenr.gov; Anna Toline C. (Catherine\_Toline@nps.gov); C. Andy Miller (millerca@dhec.sc.gov); Campbell-Dunbar, Shawneille; Gary Raulerson; Gatwood Elden (elden.j.gatwood@usace.army.mil); Graves, David; Kimball Matthew (m.kimball@unf.edu); Michael Shirley (Michael.Shirley@dep.state.fl.us); Reid Dianne (dianne.reid@ncdenr.gov); Scott Geoff (geoff.scott@noaa.gov); Small Andrea (andrea.small@dep.state.fl.us); Torrens Sean (torrensi@dhec.sc.gov); W. Strom Eric (ewstrom@usgs.gov); wilsonde@dhec.sc.gov; Zimmer, Andrea  
**Subject:** Re: CCOW info with ATTACHMENTS

Hi all,

I will try to make the call tomorrow, but I am in the field. I did want to touch base about a grant proposal we are submitting tomorrow. Basically, ECU and USGS are also in the process of putting an EPA grant proposal together to improve the real-time network for the Albemarle Sound Region and if GSAA CCOW was agreeable, it would be useful to use you as a partner of support in the grant proposal. The objective of the project is as follows:

East Carolina University (ECU) plans to support the sharing of data in the Albemarle-Pamlico Sound region by 1) partnering with the U.S. Geological Survey (USGS) to migrate continuous, real-time data that will be collected by ECU in the Albemarle-Pamlico estuary into NWIS web; 2) training key local, state, and national partners on how this data can be used to improve environmental management of the estuary; and 3) working to migrate partner data from key discrete data sources into the WQX

As part of the RFP, they would like us to include a sentence of support from various partners. I would suggest something like:

**GSAA CCOW will advise project manager and contractor on data and training needs and participate in workshops to improve our achieve our goal of Clean Coastal and Ocean waters.**

**Feel free to edit if the group would like to provide support.**

**Michelle**

On Tue, Nov 12, 2013 at 2:31 PM, Hill, Kelly <kelly.hill@dnr.state.ga.us> wrote:

Hit send too quickly- here are the attachments.



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**From:** Hill, Kelly

**Sent:** Tuesday, November 12, 2013 2:28 PM

**To:** [adriene.weaver@ncdenr.gov](mailto:adriene.weaver@ncdenr.gov); Anna Toline C. ([Catherine.Toline@nps.gov](mailto:Catherine.Toline@nps.gov)); C. Andy Miller ([millerca@dhec.sc.gov](mailto:millerca@dhec.sc.gov)); Campbell-Dunbar Shawnielle ([Campbell-Dunbar.Shawneille@epamail.epa.gov](mailto:Campbell-Dunbar.Shawneille@epamail.epa.gov)); Gary Raulerson; Gatwood Elden ([elden.j.gatwood@usace.army.mil](mailto:elden.j.gatwood@usace.army.mil)); Graves, David; Kimball Matthew ([m.kimball@unf.edu](mailto:m.kimball@unf.edu)); Michael Shirley ([Michael.Shirley@dep.state.fl.us](mailto:Michael.Shirley@dep.state.fl.us)); Michelle Moorman; Reid Dianne ([dianne.reid@ncdenr.gov](mailto:dianne.reid@ncdenr.gov)); Scott Geoff ([geoff.scott@noaa.gov](mailto:geoff.scott@noaa.gov)); Small Andrea ([andrea.small@dep.state.fl.us](mailto:andrea.small@dep.state.fl.us)); Torrens Sean ([torrensi@dhec.sc.gov](mailto:torrensi@dhec.sc.gov)); W. Strom Eric ([ewstrom@usgs.gov](mailto:ewstrom@usgs.gov)); Wilson David ([wilsonde@dhec.sc.gov](mailto:wilsonde@dhec.sc.gov)); Zimmer Andrea ([zimmer.andrea@epamail.epa.gov](mailto:zimmer.andrea@epamail.epa.gov))

**Subject:** CCOW info

Hi team. In preparation for our call this Thursday I have attached my rough (and handwritten- sorry) client form that I sent to the coordinator for the DUKE Nicholas School group masters project. I had it in my notes that we had to submit it to her in November but I missed the specific November 8<sup>th</sup> deadline in one of the paragraphs. I submitted this to her this morning so I'm not sure if we'll be able to move forward or not this year. But David Graves has also contacted someone with USC that may be able to help us through their internship opportunities. His correspondence is below.

We will also need to discuss our 2014 Work Plan that is to be submitted to the EPT by December 6<sup>th</sup>. I've attached my first attempt at capturing everything we discussed in September. Please take a look and make edits and send back to me. I'll compile all changes and resend out to the group prior to submitting to the EPT.

Here is a rough agenda for our call Thursday at 2. Let me know if there are other items you would like to add.

CCOW Conference Call 11/14/13 @ 2pm

#### Agenda

1. Internship Opportunities (Duke, USC, other potential options from Kristine)
2. NWQMC Conference
  - a. State representatives
  - b. Develop agenda and goals of breakout session working group



c. Potential partners with GOMA and GLC

3. Tidal Creek Summit (\*\*make hotel reservations and register)

4. 2014 Work Plan

Thanks,

Kelly

**From:** Graves, David [<mailto:gravesda@dhec.sc.gov>]

**Sent:** Wednesday, November 06, 2013 1:37 PM

**To:** Hill, Kelly

**Subject:** Fwd: Intern

Kelly,

I initiated the following discussion with USC regarding interns to assess our environmental programs so that we can discuss both options during our conference call. The USC internship program is less formal in that it does not have a formal application process (whether that is good or bad can be debated), but progress reports are required.

One thing I didn't mention is whether the internships would be funded. DHEC has had unfunded interns from the MEERM program at USC in the past, but I don't know what their expectation would be regarding this project. Would the Duke MEM program require funding? Are we planning on requesting GSAA funding?

----- Forwarded message -----

**From:** POURNELLE, JENNY <[jpournelle@environ.sc.edu](mailto:jpournelle@environ.sc.edu)>

**Date:** Wed, Nov 6, 2013 at 11:28 AM

Subject: RE: Intern

To: "Graves, David" <[gravesda@dhec.sc.gov](mailto:gravesda@dhec.sc.gov)>

Cc: "GEIDEL, GWEN" <[geidel@environ.sc.edu](mailto:geidel@environ.sc.edu)>

David:

I've thought about this and realize that I have an ideal candidate for "intern team leader" to kick it off. Bradley Dean has just completed his MEERM degree (a sophisticated but simple-to-operate inter-agency manager's tool for assessing by-parcel impacts of storm surge & sea level rise), and has now started a PhD under Dwayne Porter at ENHS.

I believe that he's already done a lot of work with the coastal commission on that tool, so he's well-placed to start work this spring, during the development phase, and then transition in the 3-5 interns in the Fall. The nature of the issues means that we could probably fill all 3-5 positions with MEERM students (MEERM-AWNES, MEERM/JD, & MEERM), but if not, we can also pull (as appropriate, when the needs are clearly defined) from the graduate pool of affiliated faculty in, for example, ENHS, Geography, and EOS.

This sort of team project was always the vision for MEERM-AWNES, and this seems an absolutely ideal project for that. The timing works for me as well: I'll be wrapping up my current grants by next Fall, so I'll be able to give this my full attention.

Jenny

Dr. Jennifer R. Pournelle, Ph.D.

Visiting Academic, UCL-Qatar

<<http://www.environ.sc.edu/jenniferpournelle.htm>>

<<http://www.sealands.org>>

<jpournelle@environ.sc.edu>

REDACTED

Information Redacted pursuant to 5 U.S.C.  
Section 552 (b)(6), Personal Privacy

**From:** Graves, David [mailto:gravesda@dhec.sc.gov]  
**Sent:** Friday, November 01, 2013 12:15 AM  
**To:** POURNELLE, JENNY  
**Cc:** stephaniebradley@sc.edu; GEIDEL, GWEN  
**Subject:** Re: Intern

Jenny,

I think the hope of the Clean Coastal and Ocean waters (CCOW) issue area team of the GSAA is that a grad student(s) would be able to start on this project in the fall semester, next year. There has also been contact with the Nicholas School of the Environment at Duke University. According to the timeline for their MEM program, a project proposal would be developed and approved over the course of this spring semester and then a team of 3 -5 grad students would complete the project over the next academic school year. The CCOW has a conference call to be scheduled (probably the end of next week) to discuss the the application process to that program. I will also mention that I have initiated discussion with the MERM program at USC.

I talked with Stephanie Bradley and she suggested that I also contact Gwen Geidel. The gist of the project is a review and comparison of environmental regulation in each of the four states to evaluate effectiveness and to identify similarities and differences. Differences between states should be evaluated for opportunities for the States to make changes that allow for a more effective regionalized approach to coastal zone management. The CCOW has made a significant effort to catalogue each states environmental programs and this should serve as a starting point for the graduate project.

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Feel free to e-mail, or call, with your thoughts and I will send you an update after our CCOW conference call.

On Thu, Oct 31, 2013 at 4:15 PM, POURNELLE, JENNY <[jpournelle@environ.sc.edu](mailto:jpournelle@environ.sc.edu)> wrote:

Dear David-

Absolutely! I will be back in Columbia in December. Is that soon enough? Or do you need to discuss now?

Jenny

Dr. Jennifer R. Pournelle, Ph.D.

Visiting Academic, UCL-Qatar

<<http://www.environ.sc.edu/jenniferpournelle.htm>>

<<http://www.sealands.org>>

<[jpournelle@environ.sc.edu](mailto:jpournelle@environ.sc.edu)>

Information Redacted pursuant to 5 U.S.C.  
Section 552 (b)(6), Personal Privacy

**From:** Graves, David [mailto:[gravesda@dhec.sc.gov](mailto:gravesda@dhec.sc.gov)]  
**Sent:** Thursday, October 31, 2013 8:33 PM  
**To:** POURNELLE, JENNY  
**Subject:** Intern

Hi Jennifer,

Are you still connected to the MERM program? I serve on one of the issue area teams with the Governor's South Atlantic Alliance. We are investigating the possibility of having a grad student do a comparison of environmental programs across the states (NC, SC, GA and FL), as they affect coastal watersheds. I'd like to talk to you about it if it sounds like something that would interest one of your students.

Thanks.

--

David Graves, Manager

Water Quality Monitoring and Modeling Section

Bureau of Water

SC Dept. of Health & environmental Control

office: 803-898-4398

Cell: 803-609-5226

e-mail: [gravesda@dhec.sc.gov](mailto:gravesda@dhec.sc.gov)

--

David Graves, Manager

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--

David Graves, Manager

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**e-mail: [gravesda@dhec.sc.gov](mailto:gravesda@dhec.sc.gov)**

--

**Michelle Moorman**

**Biologist, N.C. Water Science Center**

**U.S. Geological Survey**

**3916 Sunset Ridge Rd.**

**Raleigh, NC 27607**

**919-571-4013 (office)**

**919-605-3980 (cell)**





## Evans, Rhonda

---

**From:** Evans, Rhonda  
**Sent:** Tuesday, March 11, 2014 2:05 PM  
**To:** Fasselt, Veronica  
**Subject:** FW: FW:

---

**From:** Crowell, Bill [<mailto:bill.crowell@ncdenr.gov>]  
**Sent:** Monday, November 18, 2013 12:19 PM  
**To:** Evans, Rhonda  
**Subject:** FW:

Todd told me about this last week - FYI

William L. Crowell, Jr., Ph.D., AICP, CEE  
Director  
[Albemarle-Pamlico National Estuary Partnership](#)  
1601 Mail Service Center  
Raleigh, NC 27699-1601  
(919) 707-8633  
[Bill.Crowell@apnep.org](mailto:Bill.Crowell@apnep.org)

*E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.*

---

**From:** Wilson Laney <[Wilson\\_Laney@fws.gov](mailto:Wilson_Laney@fws.gov)>  
**Date:** Monday, November 18, 2013 12:03 PM  
**To:** William Crowell <[bill.crowell@ncdenr.gov](mailto:bill.crowell@ncdenr.gov)>, Dean Carpenter <[dean.carpenter@ncdenr.gov](mailto:dean.carpenter@ncdenr.gov)>  
**Cc:** "DRader@edf.org" <[DRader@edf.org](mailto:DRader@edf.org)>, .  
**Subject:** FW:

Bill and Dean,

REDACTED

FYI. I was just told about this this morning by FWS colleagues.

Exemption 6 Personal Privacy

/s/ Wilson

**From:** Ellis, John [[mailto:john\\_ellis@fws.gov](mailto:john_ellis@fws.gov)]  
**Sent:** Monday, November 18, 2013 9:53 AM  
**To:** Wilson Laney; Doug Newcomb; Mike Wicker; Gary Jordan  
**Subject:**

<http://towndock.net/guest-columnist/lower-neuse-river-watershed-being-destroyed>

<http://www.nccoast.org/Article.aspx?k=faldee50-666a-494b-a176-eeef41aaea3e>

<http://pamlico.preview.vc3.com/Data/Sites/1/media/corp-of-engineer-letter-regarding-atlas-track.pdf>



**Evans, Rhonda**

---

**From:** Evans, Rhonda  
**Sent:** Tuesday, March 11, 2014 2:04 PM  
**To:** Fasselt, Veronica  
**Subject:** FW: APNEP Symposium 11/20/13

REDACTED

---

**From:** Crowell, Bill [mailto:bill.crowell@ncdenr.gov]

Exemption 6 Personal Privacy

**Sent:** Thursday, November 21, 2013 2:51 PM

**To:** [abigail.poray@unc.edu](mailto:abigail.poray@unc.edu); [agarcia@usgs.gov](mailto:agarcia@usgs.gov); [allenth@ecu.edu](mailto:allenth@ecu.edu); Weakley, Allison; [Amv@vt.edu](mailto:Amv@vt.edu); [anaz@ncccoast.org](mailto:anaz@ncccoast.org); [ardonsayaom@ecu.edu](mailto:ardonsayaom@ecu.edu); Peck, Barbara; [bdoll@ncsu.edu](mailto:bdoll@ncsu.edu); Swartley, Bill; [biota@vt.edu](mailto:biota@vt.edu); [bircht@ecu.edu](mailto:bircht@ecu.edu); [brownpickrene09@students.ecu.edu](mailto:brownpickrene09@students.ecu.edu); Gossage, Bryan; [buonassissic12@students.ecu.edu](mailto:buonassissic12@students.ecu.edu); [Carrollj@uncw.edu](mailto:Carrollj@uncw.edu); Jensen, Christine; [Corbettd@ecu.edu](mailto:Corbettd@ecu.edu); [covim@ecu.edu](mailto:covim@ecu.edu); [cpdsuggs@embarqmail.com](mailto:cpdsuggs@embarqmail.com); [cpeoples@tnc.org](mailto:cpeoples@tnc.org); Hardy, Craig; [damej@chowan.edu](mailto:damej@chowan.edu); [dave@chesapeakeadata.com](mailto:dave@chesapeakeadata.com); Carpenter, Dean; Reid, Dianne; [dmsybert@csi.northcarolina.edu](mailto:dmsybert@csi.northcarolina.edu); Luben, Dyk; [ejtheu@email.unc.edu](mailto:ejtheu@email.unc.edu); Fensin, Elizabeth; [erinf@ncccoast.org](mailto:erinf@ncccoast.org); Evans, Rhonda; Tarver, Fred; [Fred@NCWF.org](mailto:Fred@NCWF.org); [george@riverguardfdn.org](mailto:george@riverguardfdn.org); [gittman@email.unc.edu](mailto:gittman@email.unc.edu); [gloria\\_putnam@ncsu.edu](mailto:gloria_putnam@ncsu.edu); [harrison@ptrf.org](mailto:harrison@ptrf.org); [heather\\_cayton@ncsu.edu](mailto:heather_cayton@ncsu.edu); [Heidi.M.Wadman@usace.army.mil](mailto:Heidi.M.Wadman@usace.army.mil); [hpaerl@email.unc.edu](mailto:hpaerl@email.unc.edu); [hunt@ce.berkeley.edu](mailto:hunt@ce.berkeley.edu); [ikroll@live.unc.edu](mailto:ikroll@live.unc.edu); [islandamy@coastalnet.com](mailto:islandamy@coastalnet.com); [jack\\_thigpen@ncsu.edu](mailto:jack_thigpen@ncsu.edu); Nicholson, Janine; Green, Jason; [Jesse.McNinch@usace.army.mil](mailto:Jesse.McNinch@usace.army.mil); Baker, Jessi E; [jfeigh@wegnet.com](mailto:jfeigh@wegnet.com); [jfodrie@unc.edu](mailto:jfodrie@unc.edu); [jfurness@pcsposphate.com](mailto:jfurness@pcsposphate.com); Johnson, Jimmy; [jjacobson@washjeff.edu](mailto:jjacobson@washjeff.edu); [jmfine@usgs.gov](mailto:jmfine@usgs.gov); Mohn, Joseph J; [john.mcleod@DEQ.virginia.gov](mailto:john.mcleod@DEQ.virginia.gov); Blanchard, Jon D; Hawley, Joseph T; Smith, Joseph D; [josh.spencer@nc.usda.gov](mailto:josh.spencer@nc.usda.gov); [jtridge@email.unc.edu](mailto:jtridge@email.unc.edu); Ratcliffe, Judith; Brogan, Katherine; Evans, Katherine; West, Katy; [kdstalli@ncsu.edu](mailto:kdstalli@ncsu.edu); Keith, Darryl; [kirk@vims.edu](mailto:kirk@vims.edu); [kornp12@students.ecu.edu](mailto:kornp12@students.ecu.edu); [laurenk@ncccoast.org](mailto:laurenk@ncccoast.org); [leslie@kellenbergernc.com](mailto:leslie@kellenbergernc.com); [lexiaw@ncccoast.org](mailto:lexiaw@ncccoast.org); [lichtid@students.ecu.edu](mailto:lichtid@students.ecu.edu); Pearsall, Linda; Smart, Lindsey S; [lopezrosador@ecu.edu](mailto:lopezrosador@ecu.edu); [luczkovichj@ecu.edu](mailto:luczkovichj@ecu.edu)  
**Subject:** APNEP Symposium 11/20/13

APNEP Partners and Supporters:

Thank you for attending the 2013 APNEP Ecosystem Symposium in New Bern. We a received some positive feed back about the event. However, in an effort to improve future symposia, we would appreciate your honest feedback in the online survey. We hope to offer future symposia like this, and want to make them as beneficial to attendees as possible.

Please take a few moments to complete this evaluation: <https://www.surveymonkey.com/s/sounds-evaluation>

The 2013 symposium showcased presentations on diverse topics pertaining to the Albemarle-Pamlico watershed. APNEP partners from throughout the region convened at this day-long conference to share ideas, research, and management priorities for the Albemarle-Pamlico estuarine system. Attendees from all sectors - state and federal government, non-profit organizations, and private industry - engaged in this great opportunity for information transfer among some of the leading scientists and specialists in the field.

Thanks again

Bill

William L. Crowell, Jr., Ph.D., AICP, CEE  
Director  
Albemarle-Pamlico National Estuary Partnership  
1601 Mail Service Center  
Raleigh, NC 27699-1601  
(919) 707-8633  
Bill.Crowell@apnep.org

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REDACTED

**Wilson, Karen**

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**From:** Wilson, Karen  
**Sent:** Tuesday, October 22, 2013 1:25 PM  
**To:** Kotey, Napoleon; Farzaad, Marjan; Brown, Yolanda  
**Subject:** NC FW: FY14 leverage info for call  
**Attachments:** FY2014-Leveraging-CWMTF-projects.xlsx

Hi All,  
I called Kim as I still had not received the watershed info we spoke with her about yesterday, and she was able to get this to me quickly, as Heather was out of the office.

It looks like only 2 of the 6 were 319 watershed plans. They have reviewed the EEP plans funded by the Clean Water Management Trust fund, and determined that they are detailed enough to be equivalent to a 9-Element Watershed-based Plan.

They are trying to get the plans up on their website temporarily for our use now.

Call if you have any questions....Karen

**Karen Wilson**  
NC & SC 319 Grant Coordinator  
USEPA Region 4  
61 Forsyth St. SW  
Atlanta, GA 30303  
ph 404.562.9473

---

**From:** Nimmer, Kimberly <[kimberly.nimmer@ncdenr.gov](mailto:kimberly.nimmer@ncdenr.gov)>  
**Sent:** Tuesday, October 22, 2013 12:50 PM  
**To:** Wilson, Karen  
**Subject:** FY14 leverage info

Karen,  
Attached is a spreadsheet that I included in the information that I sent, but you apparently didn't receive due to attachment file size. This provides a list of the 6 CWMTF projects we plan to use as documentation for meeting the exemption criteria. In the far right column of the spreadsheet is the corresponding watershed plan for each project. There are two 319-funded plans which are both on our website and three EEP plans (two projects in the Charlotte area are covered by the same EEP watershed plan).

Heather should be returning from an appointment shortly. I'll try to find someone else who can help, or will work with Heather once she returns, to get the watershed plans and project work plans posted to a site from which you can download the documents in time for your 2:00 meeting.

Kim

~~~~~  
Kim Nimmer  
319 Grant Administrator  
Nonpoint Source Planning Branch  
Division of Water Resources  
1611 Mail Service Center  
Raleigh, NC 27699-1611

Phone: 919-807-6438

Email: [Kimberly.Nimmer@ncdenr.gov](mailto:Kimberly.Nimmer@ncdenr.gov)

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**From:** Stamp, Jen [Jen.Stamp@tetrattech.com]  
**Sent:** Friday, November 01, 2013 2:28 PM  
**To:** Gordon, Lisa Perras; Rua Mordecai (rua@southatlanticlcc.org)  
**Cc:** Bierwagen, Britta; Hamilton, Anna  
**Subject:** webinar Monday Nov 4, 9-11am (eastern)

Hi Lisa and Rua,

Lisa, my colleague Ben Jessup mentioned that you were at the conference last week and that data infrastructure was a hot topic during Debbie's break-out session. Debbie may have mentioned that we are holding a webinar with our state contacts and some folks from EPA and USGS on **Monday November 4 from 9-11am eastern**. If you and Rua want to sit in, you are welcome to do so. During this webinar we will be focusing on biological interfaces (Pete Ruhl from USGS will present on BioData and Dwane Young and Michael Brennan will present on EPA's WQX data sharing system) but I know that continuous data will come up as well. For this initial discussion we are trying to limit the participants to people who will be working with data that are being collected for the regional monitoring networks.

More information on the webinar (including the weblink and phone line info) can be found below. Maybe we will talk with you on Monday. Thanks!

Jen

Hello everyone,

If you are receiving this email, you are invited to this webinar and we hope that you can attend. Below you will find the call-in number and weblink for Monday's webinar. We discovered after sending out the invite that this topic is of interest to a broad audience, which is great! However, for purposes of this initial webinar, we'd like to keep the discussion focused on the needs of the regional monitoring networks. So if you forward this weblink, please limit the distribution to people who will be working with the data that is being collected for the regional monitoring networks. Also, if you have multiple people accessing the webinar from a common location, please try and view the webinar from the same desktop if possible (we have a limited number of portals for the weblink; however there is no restriction on the phone line). We may hold another webinar on a later date for a wider audience, and also plan to make notes and presentations from this webinar available to a wide audience. Thank you for your understanding!

**Accessing the webinar**

You will need internet access and a (separate) phone line.

**Phone call-in number:**

**Phone password:**

**Webinar link:**

You do **NOT** need a password to access the webinar. You can log in as a guest user. To do this, click the button next to 'Enter as a Guest.' It will prompt you to **enter your Name** (please do so – we would like to keep track of who is attending).

Please make sure your phone line is muted during the presentations.

**Agenda**

9:00-9:10 – Introduction by Britta Bierwagen (EPA ORD);

9:10-9:40 – Presentation on USGS BioData by Peter Ruhl;

9:40-10:00 – Questions;

10:00-10:30 – Presentation on WQX by Michael Brennan and Dwane Young;

10:30-11:00 – Questions & open discussion.





During this webinar, Pete Ruhl from USGS will present on BioData and Dwane Young and Michael Brennan will present on WQX. The goal is to learn more about these systems and discuss how they might fit into our path forward as we start to address data infrastructure needs associated with the RMNs. We plan to leave plenty of time for questions and discussion. In particular, we will be interested in hearing your thoughts on the following:

- Do you currently upload data to WQX?
- If not, what are the biggest barriers preventing you from doing so?
- If you were able to easily obtain data collected by other states, what types of data would you be most interested in obtaining, and what would you do with those data?
- Do you have systems in place for dealing with the continuous temperature and water level/flow data that will be collected at the RMN sites?
- If so, do you have automated QC checks built into your system, and do you have any words of wisdom to pass along to other entities that are just starting to collect these types of data?
- What do you see as the most immediate data infrastructure needs for the RMNs?

If you are unable to attend, I'd greatly appreciate it if you could email me with your thoughts on the questions above. We are hoping to be able to post the presentations on our FTP site and will also plan to post notes from the webinar.

Thank you for your interest and participation.

Jen

Jen Stamp | Aquatic Ecologist

Voice: 802.229.4508 (office) 802.839.8603 (cell) | Fax: 802.223.6551 [Jen.Stamp@tetrattech.com](mailto:Jen.Stamp@tetrattech.com)

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**From:** Gordon, Lisa Perras [mailto:[Gordon.Lisa-Perras@epa.gov](mailto:Gordon.Lisa-Perras@epa.gov)]

**Sent:** Friday, November 01, 2013 1:36 PM

**To:** Moorman, Michelle; Faustini, John; Jennifer <[dortonj@uncw.edu](mailto:dortonj@uncw.edu)>; Debra Hernandez; Chad Wagner; Holly Weyers

**Cc:** Rua Mordecai; [mary@southeastaquatics.net](mailto:mary@southeastaquatics.net); Stamp, Jen; Will Duncan; Mark Cantrell; Emily Granstaff; Laurel Barnhill; Steve Holzman

**Subject:** RE: NorEaST web portal - anything similar in the works in the southeast?

Rua,

Just back from a week-long meeting with all the state monitoring folks and these same questions came up. Give me a day to round up the notes on what we discussed there and I'll get that to you to add to the puzzle.

Lisa

Lisa Perras Gordon

Water Quality Standards



---

**From:** Moorman, Michelle [<mailto:mmoorman@usgs.gov>]  
**Sent:** Friday, November 01, 2013 10:40 AM  
**To:** Faustini, John; Jennifer <[dortoni@uncw.edu](mailto:dortoni@uncw.edu)>; Debra Hernandez; Chad Wagner; Holly Weyers  
**Cc:** Rua Mordecai; Gordon, Lisa Perras; [mary@southeastaquatics.net](mailto:mary@southeastaquatics.net); [Jen.Stamp@tetrattech.com](mailto:Jen.Stamp@tetrattech.com); Will Duncan; Mark Cantrell; Emily Granstaff; Laurel Barnhill; Steve Holzman  
**Subject:** Re: NorEaST web portal - anything similar in the works in the southeast?

Hi all,

I should also mention that the Governor's South Atlantic Alliance and Secoora has a portal that can bring in USGS data (I'm trying to find the link to the new data page), but here is the link to the old one:

<http://secoora.org/data>

I've added Jennifer Dorton and Deb Hernandez (SECOORA) to this list because I think the SECOORA portal would work for displaying the data, thus the issue is getting non-USGS data into the portal. I've also copied Chad Wagner (acting District Chief) and Holly Weyers (NC WSC district chief) as they have more information on how we can make an initiative like this happen.

As I mentioned, there are lots of us working on this initiative, but we haven't yet secured funding to implement our plans. Maybe a call would be useful.

Here is the link to the EPA grant that could potentially be used to do this: Direct link to the RFP is:

[http://www.epa.gov/exchangenetwork/grants/2014/fy\\_2014\\_exchange\\_network\\_grant\\_solicitation\\_notice\\_final.pdf](http://www.epa.gov/exchangenetwork/grants/2014/fy_2014_exchange_network_grant_solicitation_notice_final.pdf)

It is due Nov. 15, but the one limiting factor will be whether or not we can use the grant to cover USGS salaries (which would be necessary in order to get the data into NWIS).

Best,  
Michelle

On Fri, Nov 1, 2013 at 10:04 AM, Faustini, John <[john\\_faustini@fws.gov](mailto:john_faustini@fws.gov)> wrote:  
Funny, indeed. The timing couldn't be better... I have a couple hundred temperature loggers that we recently acquired using some national I&M Program funding sitting in my office awaiting deployment. We intend to deploy them to establish a regional stream temperature monitoring network on and in the vicinity of National Wildlife Refuges across the Southeast. A small group of FWS field office folks (Will Duncan, Mark Cantrell, Emily Granstaff) and myself have been working on a strategy for selecting monitoring locations that will balance a range of considerations including complementing the existing network of sites that we know about (mainly USGS and USFS), targeting less-monitored stream types, prioritizing streams with rare or sensitive species of concern, and providing data that will be useful to refuge managers. We already have a few dozen loggers of various types deployed at various locations (temp, water level, conductivity/salinity, DO, etc.), but this project (and other nascent regional I&M monitoring activities) has us thinking seriously about how to manage the data.

Given the time of tight and declining resources we face for at least the next few years, we're definitely interested in exploring ways that we can work together with others pursuing related goals to leverage those limited



resources. I also believe it would benefit all of us to move toward coordinating our monitoring activities across the various parts of the landscape where each organization works to improve our ability to "connect the dots" across the entire landscape.

Let's talk...

John

P.S. Rua, I didn't get the attachments to the email from Jen Stamp that you forwarded. Can you send that?

**John Faustini, PhD, PG**

Regional Hydrologist  
U.S. Fish & Wildlife Service, Southeast Region  
1875 Century Blvd., Suite 200  
Atlanta, GA 30345  
Ph: 404/679-7301 Fax: 404/679-7081  
[john\\_faustini@fws.gov](mailto:john_faustini@fws.gov)

On Fri, Nov 1, 2013 at 9:06 AM, Moorman, Michelle <[mmoorman@usgs.gov](mailto:mmoorman@usgs.gov)> wrote:

Hi Rua,

Funny that you ask. We (CSI, USGS, USACE) are currently working on submitting an EPA grant to do just this and are also pursuing other funding to make this happen. We have a few initiatives that are currently happening that can make this happen, but we need some support for the data side of it. I know the USGS has the capabilities and staff to do this, we just need to find some funds to cover the expenses of implementation.

We are also working on implementing a continuous monitoring network in the Albemarle-Pamlico. Since the USGS operates in every state (and other states have more robust monitoring networks), this data could be pulled together to create the continuous network for the southeast.

If you would like more information or would like to help us with the EPA grant (due Nov. 15), please contact me.

Best,  
Michelle

On Fri, Nov 1, 2013 at 8:54 AM, Rua Mordecai <[rua@southatlanticlcc.org](mailto:rua@southatlanticlcc.org)> wrote:  
Michelle, Lisa, John, any thoughts?

Rua

-----  
Rua S. Mordecai, Ph.D.  
U.S. Fish & Wildlife Service  
Science Coordinator, South Atlantic Landscape Conservation Cooperative  
Join the conversations at: <http://www.southatlanticlcc.org>  
1751 Varsity Drive, 2nd Floor, Rm. 218  
Raleigh, NC 27606-2576  
919.707.0122 office  
919.707.0293 fax



On Thu, Oct 31, 2013 at 12:59 PM, Stamp, Jen <[Jen.Stamp@tetrattech.com](mailto:Jen.Stamp@tetrattech.com)> wrote:

Hi Rua and Mary,

We're starting to have more detailed discussions with our state contacts about the data infrastructure needs associated with the regional monitoring networks. In particular, states have needs associated with the continuous temperature and flow data that they are collecting. It looks like there might be some options for storage of continuous temperature data in the northeast, mid-Atlantic and Midwest – see attached presentation by Jana Stewart (USGS).

Are you aware of any similar efforts in the southeast (attached is a map of our study area)? If not, do you think there is potential to get something like this going?

Thanks!

Jen

Jen Stamp | Aquatic Ecologist

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